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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,978	05/10/2001	Anna M. Zara	10007989	8095

7590 05/20/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

BLACK, LINH

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 05/20/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/853,978

Applicant(s)

ZARA ET AL.

Examiner

LINH BLACK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-19 is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 20-29 is/are rejected.
- 7) ☒ Claim(s) 11 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-10, 12, and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota (USP 6477437), and further in view of Cicciarelli et al. (USP 4870591).
2. As per independent claims 1 and 20,
Hirota teaches "an assembly work support system that provides instructions from the system to the worker regarding work procedures, work contents, and particular instruction points, and receives information from the worker. The work support system may be employed in a process for assembling wire harnesses." – col. 1, lines 13-18.

In the first limitation of claim 1, applicant states that "sending to a manufacturer a customer request for assembly instructions", and in the second limitation of claim 1, the applicant states that "presenting to assemblers a set of assembly instructions". Thus, examiner interprets a request for assembly instructions can

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come either from a customer or an assembler. Also, the assembly instructions would be inherently customized to the grouping of components otherwise assemblers could not assemble a complex product. Fig. 3c essentially shows groupings of instructions specific (or customized) to specific work items or components as claimed. (See also col. 6, lines 16-20).

Hirota teaches a worker, who does the assembly work or an assembler, can send a request to the assembly work support system for needed assembly instructions – fig. 4b; col. 8, lines 49-67; col. 14, lines 15-45. In addition, a request for assembly instructions in Hirota is essentially for the group of components as claimed (to assemble a group of components). Moreover, an assembly work support system can be employed to support assembling processes for products' components. Thus, the "assembly work support system" of Hirota can be used by any manufacturers who need support for their assembly lines.

- "sending to a manufacturer a customer request for assembly instructions" – figs. 4a-b; col. 8, lines 55-61; col. 14, lines 15-30.
- "presenting to assemblers a set of assembly instructions which are customized and specific to said grouping of components" – col. 2, lines 57-59; col. 3, lines 55-67; col. 15, lines 48-60.

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However, Hirota does not fairly suggest “wherein said customer and said manufacturer are different entities”. Cicciarelli et al. (USP 4870591) teach system for ensuring device compatibility – the title. Cicciarelli et al. teach manufacturers’ manuals – col. 1, lines 44-51; assembly instructions – col. 8, lines 64-67; customer manuals – col. 9, lines 25-37. Thus, it would have been obvious to one of ordinary skilled in the art at the time of the invention to combine Hirota’s teaching not only within an entity/company but also between manufactures and customers in order to efficiently facilitate the assembly process of products.

3. As per independent claims 1 and 20, Hirota teaches:

- “scanning bar-code information from said components” – col. 8, lines 55-61 (a bar code reader for reading in an article number of a wire harness or parts from a code affixed thereto).
- “grouping said bar-code information” – fig. 3c; col. 6, lines 16-20 (data chart showing a relationship between article numbers, work content items, groups of instructions and/or assembly messages, ..., and how the same are loaded into a work register for output); col. 8, lines 1-32.
- “generate said request for assembly instructions based on said grouped bar-code information and on specifications defined by said manufacturer” – col. 8, lines 55-67; col. 11, lines 49-53; col. 12, lines 16-25; fig. 4a, elements s2-s12.

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It is inherent that assembly instructions for any manufacturers' products are based on products' specifications. For example, in the computer software field, applications are developed based on applications' specifications. In other words, a specification contains instructions on how software developers will develop sub-programs and put them together to create an application.

4. As per claims 3 and 22, Hirota teaches:

- "receiving said set of assembly instructions from said manufacturer" – col. 8, lines 24-32; col. 8, lines 61-67.

5. As per claims 4 and 23, Hirota teaches:

- "formatting said received set of assembly instructions such that they are in a format utilizable by said assemblers" – col. 2, lines 54-57; col. 18, lines 10-22.

6. As per claims 5 and 24, Hirota teaches:

- "printing out said formatted set of assembly instructions for said assemblers" – col. 1, lines 40-49 and col. 2, lines 23-31 of Hirota discloses "written documents". (Assembly instructions are normally printed out as written documents for assemblers to read). However, on page 8 of the specification, applicants state "Alternatively, where assemblers are equipped with PDAs (Personal Digital Assistants) or other display devices

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capable of receiving data (even, for instance, computer displays), the instructions can be output on the screens of those devices". Hirota teaches assembly instructions can be displayed on workers' monitors – col. 8, lines 24-32.

7. As per claims 6 and 25, Hirota teaches:

- "waiting to receive said set of assembly instructions from said manufacturer prior to assembling of said group of components" – col. 2, line 64 to col. 3, line 3.

8. As per claims 7 and 26, Hirota teaches:

- "assembling said groups of components using said set of assembly instructions" – col. 4, lines 59-65; fig. 4a, elements s12-s22.

9. As per claims 8 and 27, Hirota teaches:

- "replying to said customer request by sending said customized set of assembly instructions to said customer" – col. 8, lines 24-32 and 61-67; col. 14, lines 15-31.

10. As per claims 9 and 28, Hirota teaches:

"Knowledge base" defined by the applicant as "an artificially intelligent information store that is capable when queried of generating a dynamic set of responses. The knowledge base, which is maintained by the manufacturer is designed to anticipate possible configurations of components and has logic that

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can determine what a set of assembly instructions for the queried configuration should contain and what order these instructions should take" in the specification, page 11, last paragraph.

"Knowledge base" defined as "a collection of facts and rules for problem solving. (The American Heritage Dictionary of the English Language – Fourth Edition).

- "receiving said request for assembly instructions from said customer" -
figs. 4a-b; col. 8, lines 55-61; col. 14, lines 15-30.
- "formulating a query for a knowledge base, said query based upon the content of said request" – col. 12, lines 16-35. (In step s6, all of the work content items are read by the CPU 21 in preparation for association with auxiliary data and conversion into assembly messages as appropriate. However, an automatic querying process is performed to read all of the work content items after the bar code reader obtained workers' inputs: article numbers); fig. 4a, elements s2-s6.
 - knowledge base: fig. 3b, element 21d contains rules; figs. 3a and 3c contain data, facts about work content items (col. 8, lines 1-2), specific instructions for each of the work content items (col. 8, lines 14-16), and auxiliary data corresponding to the contents of the instructions (col. 8, lines 16-18).
Proper order of assembly parts (col. 10, lines 25-48).

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- “retrieving from said knowledge base said customized set of assembly instructions, said set formed in response to said query” – col. 12, lines 26-50.

11. As per claims 10 and 29, Hirota teaches:

- “formatting said retrieved customized set of instructions into a network-ready message” – figs. 2 and 4a; col. 10, lines 7-14; col. 11, lines 63-65.

12. As per claim 12, Hirota teaches:

- “said manufacturer and said customer communicate over a communication network” – col. 3, lines 63-65; fig. 2, element 12; col. 10, lines 7-14.

Response to Arguments

Applicant's arguments with respect to claim 1-30 have been considered but are moot in view of the new ground(s) of rejection.

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Allowable Subject Matter

13. Claims 13-19 are allowed.

14. Claims 11 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 703-305-0317. The examiner can normally be reached on 8am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh Black

LINH BLACK
Examiner
Art Unit 2177

[Signature]
GRETA ROBINSON 5/19/04
PRIMARY EXAMINER